

**TRIP REPORT FOR SOIL SAMPLING  
AT RESIDENCES NEAR THE SOLUTIA, INC. FACILITY  
SAUGET, ILLINOIS**

**1.0 INTRODUCTION**

The purpose of this Trip Report (Report) is to summarize the sample collection procedures at residences in East St. Louis, Illinois located near the Solutia, Inc. facility in Sauget, Illinois. Soil sampling activities took place on August 14 and August 15, 2012. Prior to the sampling activities, TechLaw submitted a Sampling and Analysis Plan (SAP) dated July 23, 2011 to EPA which described the proposed sample collection and analytical methods. The sample locations were identified by EPA. The SAP was approved by EPA prior to the field visit. Soil samples were analyzed for polychlorinated biphenyls (PCBs). A subset of the samples was also analyzed for Resource Conservation and Recovery Act (RCRA) metals. Chemical analysis of the samples was conducted by ALS in Rochester, NY.

In total, TechLaw collected 11 five point composite surface soil samples ( with each of the five points referred to as an aliquot) and eight discrete soil samples. The purpose of the field activities conducted by TechLaw was to provide support to EPA to evaluate whether PCBs and RCRA metals are present in soil at concentrations which exceed applicable screening standards at select locations in East St. Louis, Illinois near the Solutia, Inc. facility. Global Positioning System (GPS) Coordinates were also collected at each of the aliquot locations for the composite samples and each discrete sample location. A copy of the Field Log Book for the sampling event is presented in Appendix A. A Photograph Log depicting the sampling activities is provided in Appendix B. Chain of custody (COC) forms are provided in Appendix C. The Laboratory Analytical Results are provided in Appendix D and the Data Validation Report is provided in Appendix E.

**2.0 SITE DESCRIPTION AND HISTORY**

In 2009, EPA collected soil samples from 30 residences and two parks located in Sauget and East St. Louis, Illinois, near the former PCB-manufacturing area of the Solutia, Inc. facility in Sauget, Illinois. A total of 34, five-point composite surface soil samples were collected and analyzed for PCB homologs. Samples collected from four locations in Sauget and two locations in East St. Louis had PCB concentrations which exceeded the EPA Preliminary Remediation Goal (PRG) of one part per million (ppm).

Subsequently, an air deposition model analysis was completed in January 2011, which correlated the 2009 soil sampling results with estimated emissions from the PCB- manufacturing process. The model estimated that PCB concentrations in soil in excess of one ppm are potentially present in residential areas of East St. Louis which were not previously sampled.

### 3.0 SAMPLE LOCATIONS

Prior to mobilization, EPA obtained permission from property owners to collect soil samples at residences in East St. Louis, Illinois near the Solutia, Inc. facility. A total of 19 soil samples were collected. Refer to Table 1 for a summary of the collected samples, Figure 1 for a map of the sample locations, and Appendix B - Photograph Log for a depiction of sample collection locations.

Based on field conditions and EPA's clarification, TechLaw adjusted the following soil samples from the proposed samples in the SAP dated July 23, 2011. Originally, TechLaw proposed to collect 10 five point composite soil samples from the northern portion of the former Dead Creek bed. However, per EPA Representative Ken Bardo's request, only nine samples were collected from that area. Eight of the nine samples from the former creek bed were collected as discrete samples. Only one composite sample was collected from the former creek bed.

#### Residential Property Samples

One composite surface soil sample (SS-01) was collected from [REDACTED] with additional volume containerized for a matrix spike/matrix spike duplicate (MS/MSD) sample. One composite surface soil sample (SS-02) and one duplicate sample (SS-12) were collected from [REDACTED]. Two composite surface soil samples (SS-03 and SS-04) were collected from [REDACTED]. One composite surface soil sample (SS-05) was collected from [REDACTED]. One composite surface soil sample (SS-06) was collected from [REDACTED]. One composite surface soil sample (SS-07) was collected from [REDACTED]. One composite surface soil sample (SS-08) was collected from [REDACTED]. One composite surface soil sample (SS-09) was collected from [REDACTED]. One composite surface soil sample (SS-10) was collected from [REDACTED].

#### Creek Bed Samples

One discrete subsurface soil sample (CR-01) was collected along the side of Cook Avenue. One discrete subsurface soil sample (CR-02) was collected in a wooded area 30 feet from the north edge of Cook Avenue. One discrete surface soil sample (CR-03), one discrete subsurface soil sample (CR-04), and one duplicate sample (CR-13) were collected near Transformer 7312 on the south side of Cook Avenue. One discrete soil sample (CR-05) was collected in a brush area, 70 feet south and 20 feet west of samples CR-03/04. One discrete soil sample (CR-06) was collected from a low lying area off of Cook Avenue. One discrete surface soil sample (CR-07) and one discrete subsurface soil sample (CR-08) were collected at the lowest lying point in the area. One composite surface soil sample (CR-09) was collected near cottonwood trees at the edge of the creek.

### 4.0 SAMPLE COLLECTION ACTIVITIES



The TechLaw Sampling Team collected, handled, prepared, and delivered the samples to ALS in accordance with the site-specific SAP and the Region 5 Generic Quality Assurance Project Plan (QAPP). Descriptions of the sampling procedure are included below.

During the sampling activities, appropriate quality control samples were collected in accordance with TechLaw's EPA-approved SAP and QAPP. One (MS/MSD) sample was collected. In addition, two blind duplicate samples were collected. One of the duplicate samples was collected on August 14, 2012 from sample location SS-02 collected at 1230, which was identified on the COC as SS-12, collected at 0900. The other duplicate sample was collected August 15, 2012 from CR-03 collected at 0940, and was identified on the COC as CR-13, collected at 0800.

Each of the 11 composite samples comprised soil from five aliquot locations. Aliquot samples were collected along a transect 10 to 20 feet apart. The presence of trees at CR-09 and SS-06 prevented collection along a straight line. EPA and TechLaw determined aliquot locations for these two areas in the field. GPS coordinates for each aliquot are presented in Table 1. Ten of the composite samples were collected from residential properties (SS) and the remaining composite sample was collected from the former Dead Creek bed (CR). Soil was collected using disposable plastic spoons. The same disposable plastic spoon was used to collect each of the five aliquot soil samples. Each aliquot soil sample soil was then placed in a disposable plastic bowl and homogenized with the same plastic spoon used to collect the aliquots. After the five aliquot samples were homogenized the composited soil was place into the appropriate sample container. The plastic spoon was disposed of after the collection of each composite sample. Each aliquot location was labeled A, B, C, D, or E. Each of the composite samples was collected into one 8 ounce (oz) wide-mouth glass jar with Teflon-lined lid for PCB analysis. A second volume was collected for the composite sample CR-09 into another 8-oz wide-mouth glass jars with Teflon-lined lids for RCRA metals analysis.

Per EPA's direction, in place of the additional composite samples that were originally proposed for the former Dead Creek area, eight discrete samples (CR) were collected from the former bed. These discrete samples were collected with a hand auger and shovel. Samples from each of the eight discrete sample locations were collected into two 8-oz glass jar with Teflon-lined lid for PCB and RCRA metals analyses. The TechLaw Sampling Team decontaminated the stainless steel hand augers and shovel prior to collection of each sample, and an equipment rinsate sample was collected on August 15, 2012 at 1650.

All samples were properly labeled by indicating the date and time of collection. The bottles were placed into coolers lined with a heavy duty garbage bag, and packed with double-bagged ice to keep the samples cooled to less than 4 degrees (°) Celsius (C). The garbage bag was then tied into a knot and secured with tape. Chain-of-custody forms (copies are included in Appendix D) were placed in clear plastic bags and taped to the inner side of the cooler lids. The coolers were sealed with strapping tape and secured with custody seals. Samples were shipped overnight, via Federal Express, to ALS in Rochester, New York. Appropriate chain-of-custody procedures were utilized by TechLaw personnel at all times to maintain the integrity of the

samples as detailed in the QAPP.

Any soil remaining in the disposable bowl after the sample jars had been filled were placed back into the area from which the sample was originally obtained; as such, only non-hazardous Investigative Derived Waste (IDW) was produced. Based on historical analytical data and process knowledge, disposable PPE and disposable sampling equipment were managed as non-hazardous waste and placed in a dumpster for disposal at a municipal landfill.

TechLaw used pre-cleaned disposable sampling equipment and supplies except for the hand auger and shovel. These two pieces of equipment were first wiped with a paper towel to remove large deposits. Then, the equipment was washed in a solution of deionized water (DI water) and Alconox. After washing, the equipment was triple rinsed with DI water and dried with a paper towel. As indicated in the EPA-approved SAP, decontamination fluids were disposed of onto the ground surface of the former creek bed.

## 5.0 ANALYTICAL RESULTS

TechLaw collected 21 soil samples including two duplicate samples during the August 2012 sampling event. All samples were analyzed for PCBs by Method 680. A subset of the samples, those collected from the former creek bed, was also analyzed for RCRA metals by Methods 6010C and 7471B.

Several PCBs were detected in the soil samples analyzed by ALS. Tetrachlorobiphenyls were detected in all composite surface soil samples from residential properties (SS-01 through SS-10 and SS-11) as well as in soil samples CR-05, CR-06, and CR-09 with the highest concentration (720 micrograms per kilogram ( $\mu\text{g/kg}$ )) found in sample SS-01. Hexachlorobiphenyls were detected in all samples except CR-02, CR-03, and CR-13 (the duplicate of CR-03). Heptachlorobiphenyls were detected in 19 of the samples with the non-detects occurring in CR-02 and CR-03. PCB 209 was detected in all samples except in CR-03 and its duplicate CR-13. The highest concentration of PCB 209 (1700  $\mu\text{g/kg}$ ) was found in sample SS-08. Table 2b, Summary of PCB Analytical Results, presents additional data on the PCBs that were detected during the August 2012 sampling event.

Several RCRA metals were detected, including arsenic and chromium, above EPA Regional Screening Levels (RSLs) for residential soil in all of the samples analyzed for metals (CR-01 through CR-09 and CR-13). The highest arsenic and chromium concentrations were detected in CR-05 with values of 27.8 milligrams per kilogram ( $\text{mg/kg}$ ) and 33.2  $\text{mg/kg}$ , respectively. Lead, above the EPA RSLs for residential soil, was detected in CR-05, CR-06, CR-07, and CR-08. Table 2a, Summary of RCRA Metals Analytical Results, presents the RCRA metals that were detected during the August 2012 sampling event. Analytical Data Reports are included in the report as Appendix D.

As requested by EPA, TechLaw performed a full data validation on 25% of the samples analyzed for polychlorinated biphenyl compounds as homologs (PCBs). Additionally, TechLaw qualified



all PCB data with Quality Control exceedances. Based on the data validation, no analytical results were rejected. A copy of the data validation report is included in Appendix E.

## **TABLES**



Table 1. Sample Collection Summary

Sample ID <sup>v</sup>	Sample Date	Sample Time	Aliquot ID <sup>w</sup>	GPS Coordinates		Depth Interval (inches)	Notes
				Latitude N	Longitude W		
SS-01	08/14/12	1010	A	36°01'71"N	90°09'31.60"W	0 - 6	silty loam, some gravel, dry
			B	36°01'50"N	90°09'31.43"W	0 - 6	silty loam, rusty bolt, gravel, sandstone
			C	36°01'43"N	90°09'31.43"W	0 - 6	silty loam, piece of brown glass bottle
			D	36°01'26"N	90°09'31.43"W	0 - 6	silty loam, piece of clear glass bottle, cinders, gravel
			E	36°01'11"N	90°09'31.43"W	0 - 6	silty loam, gravel/stone
SS-02	08/14/12	1230	A	36°07'62"N	90°09'31.43"W	0 - 6	concrete pieces present
			B	36°07'51"N	90°09'31.43"W	0 - 6	angular rocks, brick, small gravels, ~5" plastic
			C	36°07'40"N	90°09'31.43"W	0 - 5.5	brick pieces
			D	36°07'30"N	90°09'31.43"W	0 - 5	more clay in soil, but still silty loam
			E	36°07'20"N	90°09'31.43"W	0 - 6	rocks, clay
SS-03	08/14/12	1320	A	36°08'18"N	90°09'31.43"W	0 - 6	0-3" brown clay, silts with gravels below
			B	36°08'28"N	90°09'31.43"W	0 - 6	0-2" brown clay, more charcoal and burned wood
			C	36°08'35"N	90°09'31.43"W	0 - 6	clay to 2", no notable debris
			D	36°08'44"N	90°09'31.43"W	0 - 6	clay to 2.5" then silt with gravel; more broken bottles, cinders
			E	36°08'50"N	90°09'31.43"W	0 - 6	gravel at the bottom
SS-04 <sup>x</sup>	08/14/12	1350	A	36°07'55"N	90°09'39.670"W	0 - 6	black loam, browning with depth, glass and gravel, brick pieces
			B	36°08'048"N	90°09'39.779"W	0 - 6	glass, charcoal, and nails; not as black with gravel, more clay
			C	36°08'134"N	90°09'39.903"W	0 - 6	same gravel, otherwise silty loam
			D	36°08'220"N	90°09'39.903"W	0 - 6	same gravel, otherwise silty loam
			E	36°08'306"N	90°09'39.903"W	0 - 6	nail present
SS-05	08/14/12	1515	A	36°08'392"N	90°09'39.903"W	0 - 6	brown clay to 3", gravel, cinders
			B	36°08'478"N	90°09'39.903"W	0 - 6	brown clay, no gravel to 6"
			C	36°08'564"N	90°09'39.903"W	0 - 6	brown clay, no gravel to 6"; hard packed
			D	36°09'050"N	90°09'39.903"W	0 - 6	glass, black loam with gravel, possible coal, brown clay on one side
			E	36°09'136"N	90°09'39.903"W	0 - 6	black loam, no gravel, no clay, glass

Sample ID <sup>v</sup>	Sample Date	Sample Time	Aliquot ID <sup>w</sup>	GPS Coordinates		Depth Interval (inches)	Notes
				Latitude N	Longitude W		
SS-06	08/14/12	1620	A	38°36'19.089" N	90°09'55.305" W	0 - 6	gravel, brownish grey loam
			B	38°36'18.793" N	90°09'55.841" W	0 - 6	loam, some gravel, bricks
			C	38°36'18.702" N	90°09'56.698" W	0 - 6	brick, brownish grey
			D	38°36'18.731" N	90°09'56.801" W	0 - 6	glass
			E	38°36'18.754" N	90°09'55.870" W	0 - 6	marble
SS-07	08/14/12	1750	A	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			B	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			C	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			D	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			E	38°36'18.754" N	90°09'55.870" W	0 - 6	none
SS-08	08/15/12	1204	A	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			B	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			C	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			D	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			E	38°36'18.754" N	90°09'55.870" W	0 - 6	none
SS-09	08/15/12	1328	A	38°36'18.754" N	90°09'55.870" W	0 - 6	black organic then more brown; all silt
			B	38°36'18.754" N	90°09'55.870" W	0 - 6	black organic then more brown; all silt
			C	38°36'18.754" N	90°09'55.870" W	0 - 6	black organic then more brown; all silt
			D	38°36'18.754" N	90°09'55.870" W	0 - 6	black organic then more brown; all silt
			E	38°36'18.754" N	90°09'55.870" W	0 - 6	more clay under grassy loam
SS-010	08/15/12	1528	A	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			B	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			C	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			D	38°36'18.754" N	90°09'55.870" W	0 - 6	none
			E	38°36'18.754" N	90°09'55.870" W	0 - 6	none
SS-12 <sup>y</sup>	08/14/12	1230	A	38°36'18.754" N	90°09'55.870" W	0 - 6	concrete pieces present
			B	38°36'18.754" N	90°09'55.870" W	0 - 6	angular rocks, brick, small gravels, ~5" plastic
			C	38°36'18.754" N	90°09'55.870" W	0 - 5.5	brick pieces
			D	38°36'18.754" N	90°09'55.870" W	0 - 5	more clay in soil, but still silt loam
			E	38°36'18.754" N	90°09'55.870" W	0 - 6	rocks, clay
CR-01	08/14/12	1820	----	38°36'18.471" N	90°09'59.103" W	6 - 12	lots of brick, rock, fill; loamy silt
CR-02	08/15/12	0903	----	38°36'25.146" N	90°09'57.481" W	4 - 8	tree roots and debris
CR-03	08/15/12	0940	----	38°36'24.194" N	90°09'58.130" W	0 - 6	topsoil, fill



Sample ID <sup>v</sup>	Sample Date	Sample Time	Aliquot ID <sup>w</sup>	GPS Coordinates		Depth Interval (inches)	Notes
				Latitude N	Longitude W		
CR-04	08/15/12	0945	----	38°36'24.194"	90°09'58.130"	6 - 12	fill
CR-05	08/15/12	1014	----	38°36'23.560"	90°09'58.693"	not recorded	in brush area
CR-06	08/15/12	1100	----	38°36'21.038"	90°09'57.936"	not recorded	brick, porcelain, glass, plastic; dark brown, greyish silty loam
CR-07	08/15/12	1124	----	38°36'22.150"	90°09'57.224"	0 - 6	none
CR-08	08/15/12	1129	----	38°36'22.150"	90°09'57.224"	6 - 12	none
CR-09	08/15/12	1247	A	38°36'18.718"	90°09'58.892"	0 - 6	organic topsoil, gravel
			B	38°36'18.859"	90°09'58.697"	0 - 6	gravel, brick; glass, chunks of wood
			C	38°36'18.941"	90°09'59.072"	0 - 6	bricks and gravel
			D	38°36'19.048"	90°09'58.965"	0 - 6	bricks and gravel; more leaf litter
			E	38°36'19.132"	90°09'58.846"	0 - 6	gravel; organic matter
CR-13 <sup>z</sup>	08/15/12	0940	----	38°36'24.194"	90°09'58.130"	0 - 6	topsoil, fill

Notes: v- Soil sample identification for samples collected from residential properties were recorded as SS-##; samples collected from the former Dead Creek bed area were recorded as CR-##

w- each composite sample included five aliquots, recorded as A, B, C, D, E; ---- = no aliquots because discrete sample was collected

x- SS-04 was collected from the same property as SS -03; SS -04 was located approximately 35 feet southwest of SS -03

y- SS-12 is the duplicate of SS-02

z- CR-13 is the duplicate of CR-03

\* - GPS locations are north of actual locations due to presence of tree canopy over aliquot locations for SS-06

**TABLE 2a**  
**SUMMARY OF RCRA METALS ANALYTICAL RESULTS**  
**RESIDENCES NEAR THE SOLUTIA, INC. FACILITY**  
**AUGUST 2012 SAMPLING EVENT**

ANALYTE	EPA RSLs for Residential Soils <sup>x</sup>	CR-01		CR-02		CR-03		CR-04		CR-05		CR-06		CR-07		CR-08		CR-09 <sup>y</sup>		CR-13 <sup>z</sup>	
		RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q
		RCRA Metals (mg/kg)																			
Arsenic	0.39	10.1		15.3		12.6		9.0		27.8		19.6		16.6		26.8		10.7		9.3	
Barium	15000	270		374		164		284		698		281		361		603		181		335	
Cadmium	70.0	6.56		13.4		6.18		4.49		46.2		27.8		45.2		19.5		37.4		4.92	
Chromium	0.29	21.6		23.0		15.7		15.2		33.2		23.5		23.9		30.7		18.3		13.6	
Lead	400	302		388		63.0		276		1290		579		1290		3460		328		186	
Mercury	10	0.199		0.368		0.064		0.183		0.412		1.04		0.663		0.641		0.324		0.103	
Selenium	390	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Silver	390	1.1		1.1		1.1	U	1.1	U	4.6		3.2		3.3		2.0		2.4		1.1	U

**NOTES:**

10.1 = Exceeded Region 6 EPA RSLs for Residential Soils

mg/kg = Milligrams per Kilogram

Q = Qualification or description

U = The analyte was not detected above the reported sample quantitation limit

x- EPA RSLs for residential soil were obtained from the Regional Screening Level (RSL) Summary Table April 2012

y- CR-09 is a composite sample; all other samples in Table 2a are discrete samples

z- CR-13 is a duplicate of CR-03



TABLE 2b  
SUMMARY OF PCB AND PESTICIDE ANALYTICAL RESULTS  
RESIDENCES NEAR THE SOLUTIA, INC. FACILITY  
AUGUST 2012 SAMPLING EVENT

ANALYTE	SS-01*		SS-02*		SS-03		SS-04		SS-05		SS-06		SS-07		SS-08		SS-09*		SS-10		SS-12**		CR-01		CR-02		CR-03*		CR-04		CR-05		CR-06		CR-07		CR-08		CR-09		CR-13**			
	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q	RESULT	Q		
PCBs (µg/kg)																																												
Monochlorobiphenyls	67	UJ	12	UJ	6.7	U	11	UJ	14	U	23	U	6.8	U	32	U	22	U	4.5	U	12	U	2.2	UJ	11	UJ	14	UJ	11	UJ	11	UJ	11	UJ	12	UJ	55	UJ	2.3	UJ	6.9	UJ		
Dichlorobiphenyls	67	U	12	U	6.7	U	11	U	14	U	23	U	6.8	U	32	U	22	U	4.5	U	12	U	2.2	U	11	U	14	U	11	U	11	U	11	U	12	U	55	U	2.3	U	6.9	U		
Trichlorobiphenyls	93		12	U	6.7	U	11	U	14	U	23	U	6.8	U	32	U	22	U	4.5	U	12	U	2.2	U	11	U	14	U	11	U	42		11	U	12	U	55	U	2.3	U	6.9	U		
Tetrachlorobiphenyls	720		25		8.2		18		30		29		31		88		81		16		22		2.2	U	11	U	42	J	11	U	170		17		12	U	55	U	4.2		12	J		
Pentachlorobiphenyls	2500	J	55		21		65		140		56		51		620		170		47		58		3.6	J	150	J	14	UJ	52	J	220		39	J	40	J	100	J	14		67	J		
Hexachlorobiphenyls	2100		63		23		65		360		59		68		370		150		82		61		11		920	J	14	UJ	53		160		45		45		130		14		42	J		
Heptachlorobiphenyls	960		39		11		35		260		29		35		83		100		73		32		7.9		700	J	14	U	13		38		41		18		57		14		7.9			
Octachlorobiphenyls	320		19		10		18		54		23	U	12		32	U	82		250		32		2.7		93		20		12		11	U	14		12	U	55	U	4.7		6.9	U		
Nonachlorobiphenyls	120		190		110		160		240		100		340		280		370	J	190		16		28		210	J	120		18		99		41		55	U	28		72	J				
PCB 209	250		670		460		650		1100		1200		440		1700		840		250		730		62		53		950	J	440		56		440		150		120		110		300			

NOTES:  
mg/kg = Milligrams per Kilogram  
Q = Qualification or description  
\* Denotes full validation  
U = The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit  
UJ = The reported quantitation limit is estimated because Quality Control criteria were not met. Element or compound was not detected.  
J = The associated numerical value is an estimated quantity because the Quality Control criteria were not met.  
x- SS-12 is a duplicate of SS-02  
y- CR-09 is a composite sample; all other CR-### samples are discrete  
z- CR-13 is a duplicate of CR-03

## FIGURES



# Legend

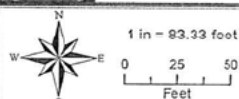
○ Sample Location

NOTE: Due to poor satellite coverage, CR-05 is located in the trees just west of the point CR-05 Pivot



**TechLaw**

**Figure 1 - Dead Creek Sample Locations  
Solutia Residential Soil Sampling  
Sauget, Illinois**



Map Date: September, 26, 2012  
Data Source: TechLaw (2012)  
Sample Locations: TechLaw (2012)  
Imagery: Bing Aerial (2010)  
Map Projection/Coordinate System:  
UTM, Meters, 16 North, NAD 83

## **APPENDIX A**

### **Field Log Book**

## **APPENDIX B**

### **Photograph Log**



## **APPENDIX C**

### **Chain of Custody Forms**

**APPENDIX D**

**Analytical Data**

**(Attached CD)**

## **APPENDIX E**

### **Data Validation Report**

## ORGANIC DATA VALIDATION REPORT

Validated by: Amy Dahl, TechLaw, Inc.  
 Report Date: September 24, 2012  
 Project/Site: Solutia  
 Sample Delivery Group: R1205380  
 DCN#: RZ2.05033.07-ID-046

This memorandum presents the data validation report for polychlorinated biphenyl compounds as homologs (PCBs) for data obtained during the field activities for the above referenced work assignment. The purpose of this review is to provide a data validation of the following samples collected August 14-15, 2012 and analyzed by Columbia Analytical Services doing business as ALS Environmental in Rochester, NY. In addition, a full validation including calculation checks was performed on the selected sample(s) identified below:

Field Sample Numbers	Laboratory ID	Matrix	Preparation and Analyses
SS-01 <sup>+</sup>	R1205380-001	Soil	PCBs – SW846 3541, EPA Method 680
SS-02 <sup>+</sup>	R1205380-002	Soil	
SS-03	R1205380-003	Soil	
SS-04	R1205380-004	Soil	
SS-05	R1205380-005	Soil	
SS-06	R1205380-006	Soil	
SS-07	R1205380-007	Soil	
SS-08	R1205380-008	Soil	
SS-09	R1205380-009	Soil	
SS-10	R1205380-010	Soil	
SS-12 <sup>+</sup>	R1205380-011	Soil	
CR-01	R1205380-012	Soil	
CR-02	R1205380-013	Soil	
CR-03 <sup>+</sup>	R1205380-014	Soil	
CR-04	R1205380-015	Soil	
CR-05	R1205380-016	Soil	
CR-06	R1205380-017	Soil	
CR-07	R1205380-018	Soil	
CR-08	R1205380-019	Soil	
CR-09	R1205380-020	Soil	
CR-13 <sup>+</sup>	R1205380-021	Soil	
EB-01	R1205380-022	Water	PCBs – SW846 3510C, EPA Method 680

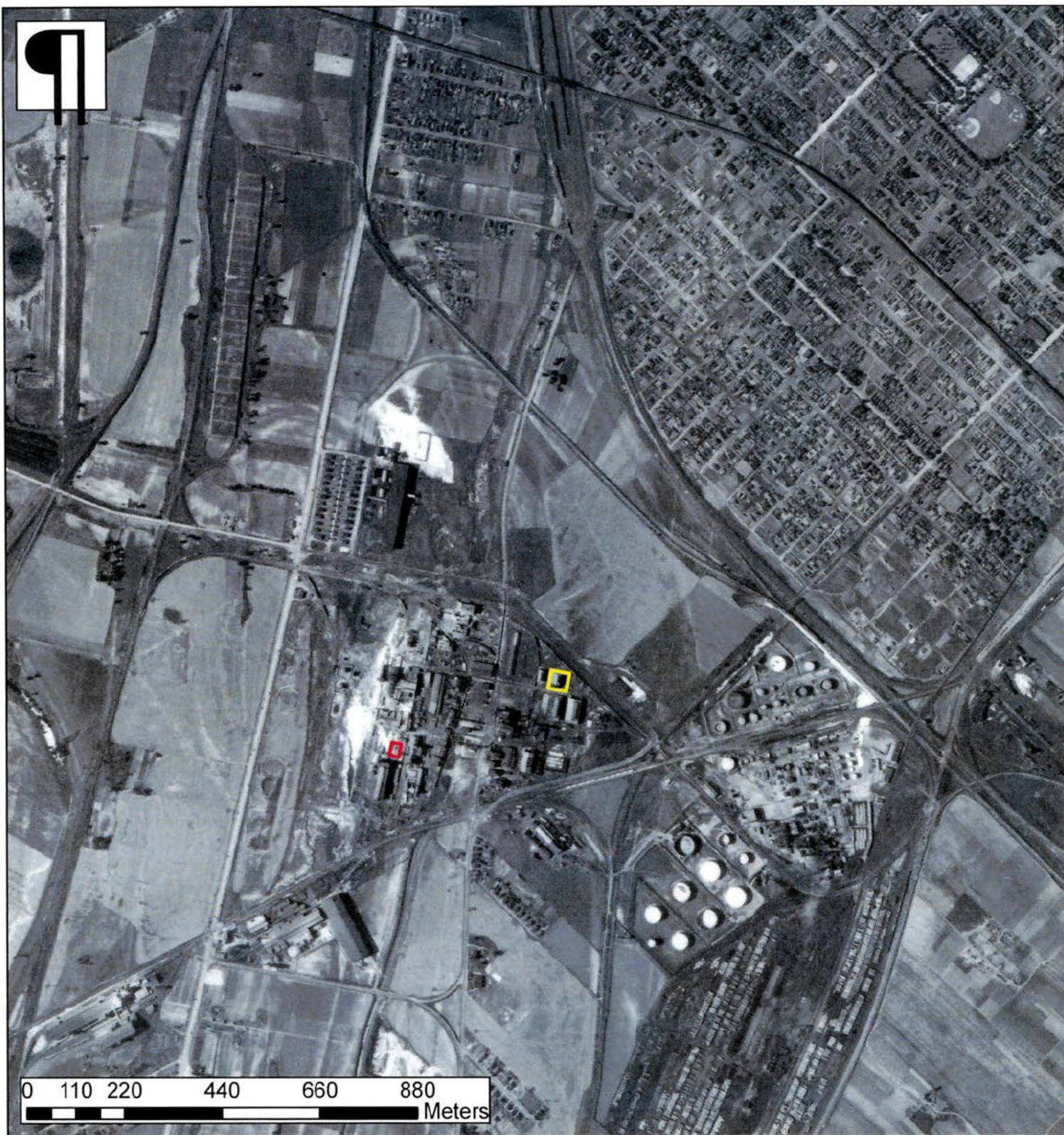
<sup>+</sup> denotes full validation





LEGEND		INCINERATOR	
(	Incinerator	SOLUTIA INC.	
		SAUGET, IL	
		1968	
		 RISK MANAGEMENT & ENGINEERING , LTD	





LEGEND	PLANT OVERVIEW
<div data-bbox="365 1856 446 1898" style="border: 2px solid yellow; width: 50px; height: 20px; display: inline-block; margin-right: 10px;"></div> PCB Manufacturing Plant	SOLUTIA INC.
	SAUGET, IL
	1940
	<div data-bbox="1089 1965 1227 2028" style="display: inline-block; text-align: center;"><b>RME</b> <small>RISK MANAGEMENT &amp; ENGINEERING</small></div> RISK MANAGEMENT & ENGINEERING , LTD





LEGEND		PLANT OVERVIEW	
<div><div></div> PCB Manufacturing Plant</div> <div><div></div> Incinerator</div>		SOLUTIA INC.	
		SAUGET, IL	
		1968	
		<div><div>RME</div><div>RISK MANAGEMENT &amp; ENGINEERING, LTD</div></div>	






LEGEND		PLANT OVERVIEW	
<div><div></div> PCB Manufacturing Plant</div> <div><div></div> Incinerator</div>		SOLUTIA INC.	
		SAUGET, IL	
		1974	
		<div><div>RME</div><div>RISK MANAGEMENT &amp; ENGINEERING, LTD</div></div>	






LEGEND		PCB MANUFACTURING	
(	PCB Manufacturing Plant	SOLUTIA INC.	
		SAUGET, IL	
		1940	
			RISK MANAGEMENT & ENGINEERING , LTD






LEGEND	PCB MANUFACTURING
( PCB Manufacturing Plant	SOLUTIA INC.
	SAUGET, IL
	1968
	<div data-bbox="1086 1961 1230 2022">RME</div> <div data-bbox="1255 1961 1528 2022">RISK MANAGEMENT &amp; ENGINEERING , LTD</div>



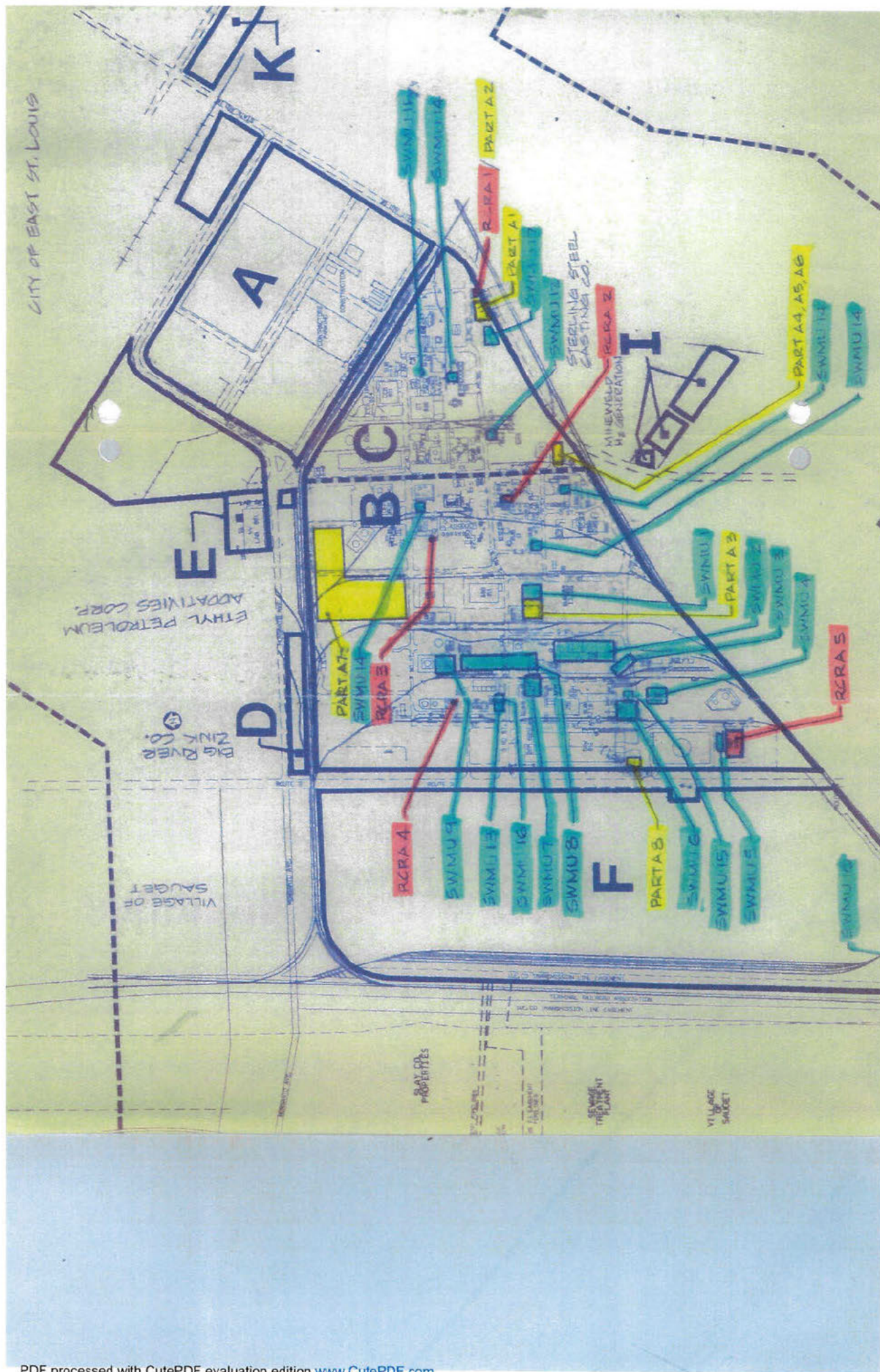


LEGEND	PCB MANUFACTURING
( PCB Manufacturing Plant	SOLUTIA INC.
	SAUGET, IL
	1974
	 <b>RISK MANAGEMENT &amp; ENGINEERING , LTD</b>

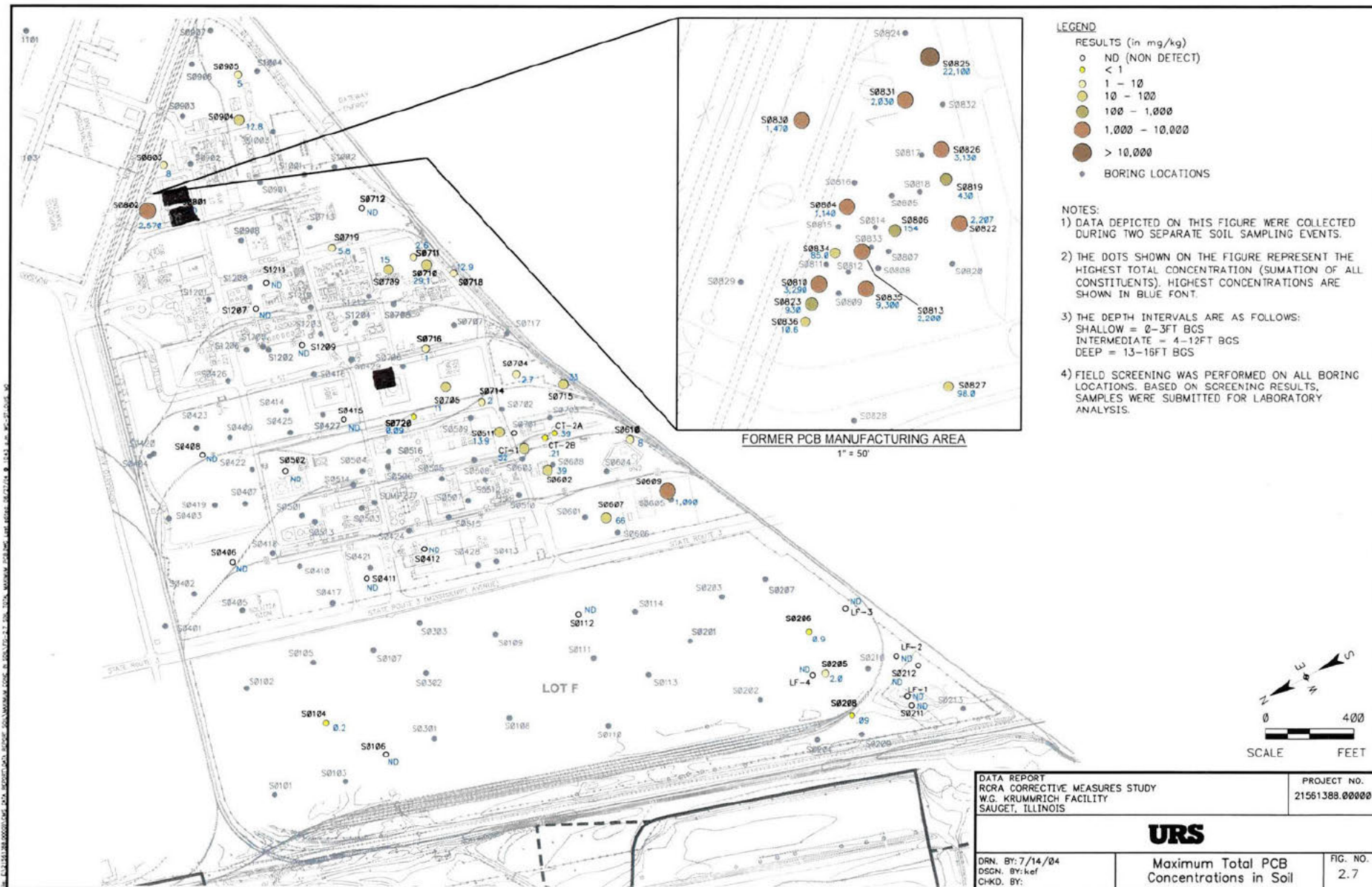


LEGEND	INCINERATOR
<div data-bbox="418 1864 776 1915">( Incinerator</div>	SOLUTIA INC.
	SAUGET, IL
	1940
	<div data-bbox="1089 1969 1230 2032">RME</div> <div data-bbox="1255 1965 1531 2024">RISK MANAGEMENT &amp; ENGINEERING , LTD</div>

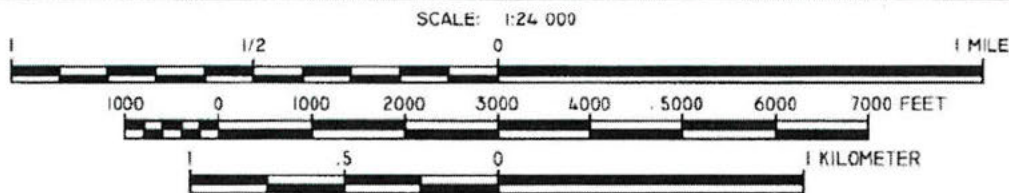
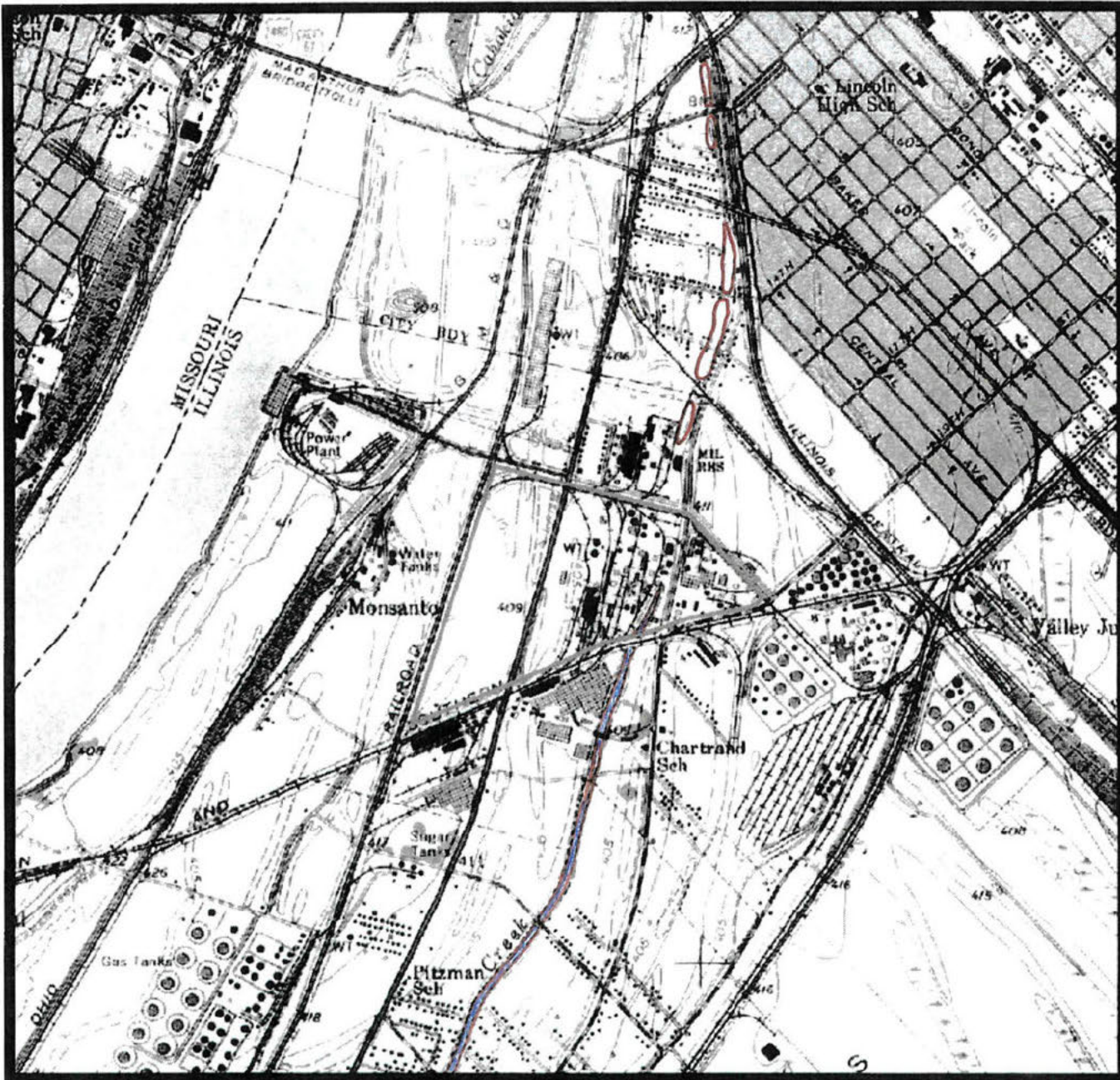












NORTH

**MAP REFERENCE:**

PORTION OF U.S.G.S. QUADRANGLE MAP  
7 1/2 MINUTE SERIES (TOPOGRAPHIC)  
CAHOKIA, ILLINOIS-MISSOURI 1954



QUADRANGLE LOCATION

**SOLUTIA, INC.**  
**W.G. KRUMMRICH FACILITY**  
**SAUGET, ILLINOIS**

**FIGURE 3**  
**1954 MAP**

DATE:  
JULY 27, 2000

JOB NO.:  
80207002.06

DRAWN BY:  
MAR

CHECKED BY:  
SB

SCALE:  
AS SHOWN

**URS**

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